Bridging the Delta's Digital Divide
A call to move beyond the institutional setting

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The Digital Divide is the term used as a metaphor for the different degrees of separation that have developed between those who have access to the tools of the Information Age — computers and the Internet — plus the skill to use the tools, and those who don't.

The Digital Divide cannot be measured, understood or addressed without recognizing that access and skills are the twin cores of the issue and the challenge before us.

The Digital Divide is but one of the many divides we have in our society — the Economic Divide, the Racial Divide, the Gender Gap, The Urban/Rural Divide, to name but a few. But, as we move further into the Information Age the results of the Digital Divide will become more pronounced. Put simply, those who have the access and the skills will do much better than those who don't — where a company, a community, an individual or a family falls on the Digital Divide will either enhance or diminish the impact of the other Divides on their lives.

All of those gaps and divides are very pronounced in the Mississippi Delta Region. The Delta region comes close to defining the bottom of the Digital Divide.

But it is precisely because those other Divides are so pronounced in the Delta that bridging the Digital Divide in the Delta holds out the potential to bridge or at the very least start to close the other Divides which have hampered the Delta region's progress.

Louisiana's Progress

There were developments in Louisiana in the year 2000 that, taken together, indicate that rapid progress might be made to close the access divide in a large portions of the state.

Three of these developments have the potential to unleash significant change in Louisiana in the near term. Taken together, they create the potential to fundamentally change the economic equation in Loui-

siana.

1) State Infrastructure: State government gained outright ownership of hundreds of miles of installed fiber optic cables in the rights of way along our Interstate highways at virtually no cost. They also got the equipment needed to convert that dark fiber into a world-class network

2) Local Infrastructure: Municipalities in Louisiana also began to act on the recognition of a core truth of the Information Age — Telecommunications infrastructure is now essential economic infrastructure.

3) Human Capital: The Louisiana Community and Technical College System (LCTCS) launched a network of network technology training programs. Eight Cisco Academies are being created on technical college campuses in Louisiana with high school affiliate programs to be created in every public school district in the state.

Take a closer look at each of these developments and their potential becomes clear.

1) State Infrastructure

The Louisiana Legislature voted in 1999 to allow the Department of Transportation and Development (DOTD) to negotiate with national and regional network building companies seeking access to the rights of way of Interstate highways in the state. The law said that DOTD could accept money or assets in exchange for allowing those companies to use those rights of way as paths for their networks. Despite some restriction which DOTD officials believe limited their hand, negotiators for the department have succeeded in obtaining for the state several strands of fiber optic cable along I-20 from Louisiana's borders with Texas and Mississippi; border to border along I-10 and I-12; and along I-49 from Lafayette to Shreveport. They obtained these fibers from six different companies, including companies like Enron, Level 3, AT&T, PF Net and CapRock Communications. Negotiations are continuing with other firms and still more companies have indicated an interest in participating in the Assets for Access program.

If some pending negotiations go favorably and if the permit holders complete their projects as proposed, the state of Louisiana will end up with a multi-strand fiber optic network that connects each of the major population centers of the state and runs through a lot of rural Louisiana in the process.

Another exciting development in Louisiana has been the recent surge in announcement of projects utilizing broadband wireless technology. Wireless technology Multiple Multiplex Distribution Systems (MMDS) have an effective broadcast radius of 35 miles. In a relatively flat state like Louisiana, building MMDS transponders connected to the fiber network at appropriate spots between the metropolitan areas could make broadband connectivity available in most of the state's rural communities and small towns.

DOTD did not take fiber from every company to which it granted access; in some cases where fiber assets were already pledged, contractors agreed to buy specific dollar amounts of networking equipment — at their discounted prices — on behalf of the department. The result is that DOTD now has fiber from Texas through New Orleans along I-10 and I-12 that is within weeks of being operational and fiber along I-20 from Monroe to Bossier City that is nearing final testing and will, by the end of this year, have fiber connecting those routes via installations along I-49 from Lafayette to Shreveport.

So, far total cash outlays for fiber and equipment — $10,000. Think about that: A network the elements of which alone would cost in excess of $10 million to purchase obtained for $10,000. When the network is fully operational later this year, it will offer connectivity at speeds and capacities that dwarf current leased network capacity. The state will be getting this tremendous network capacity just as it's LAConnections e-governance initiative begins to move significant processes and services of state government onto the Internet. This will sharply drive up the bandwidth needs of state government and the fiber network provides ample headroom to enable state government to meet those needs.

As to the potential impact of this network on state operations, consider this: Cisco Systems reported a five percent annual increase in productivity after it incorporated a company wide e-business initiative. The state of Louisiana has an annual budget of about $14 billion. Let's say the state can achieve only a one percent annual increase in productivity by using these fiber assets to launch a government wide Information Technology initiative. One percent of $14 billion is $140 million that will manifest itself as a positive cash flow somewhere in state government as a result of a one percent growth in productivity. It doesn't take long for $140 to start looking like real money.

When this network is fully operational and it has been transformed into the main connectivity backbone in the state, the Louisiana Department of Transportation and Development's Assets for Access swap program will stand as a prime example of how government can have an impact on the availability of services outside of its traditional role as telecom regulator or tax collector.

2) Local Infrastructure

The second big Digital Divide development in Louisiana in 2000 was the move by a a couple of municipal governments to enter the telecom services business. Lafayette and Ville Platte were the players in this sector, with Lafayette taking a particularly innovative approach .

Telecommunications Act of 1996 fundamentally altered the relationship between telecommunications companies and the communities they serve. To determine the new status of the relationship between communities and telecom companies, one need only follow the money. If incumbent carriers are making investment in network upgrades and rolling out new services like DSL, then it's safe to assume that the company views your community as a viable market and there is some basis for a continuing relationship. If those kinds of investments are not being made and new services are not being rolled out, then the message to communities is that getting access to modern telecom services is going to rely mostly on the talent, vision and drive of local community leadership.

In Ville Platte, the catalyst for the city council decision to enter the cable TV business was the change of ownership in the local cable system there in early 2000. Star Cable was purchased by Texas-based Classic Communications. Fearing that rate increases were not far behind the purchase and planned upgrade of the system, the Ville Platte City Council voted to enter the cable business itself. Interestingly enough, the Ville Platte initiative will not be limited to the city limits; in fact, Ville Platte has made clear its intention to offer cable TV service throughout most of Evangeline Parish.

The Lafayette Utility System zeroed in on a strategy on how to maximize the community value of the 65 mile fiber loop it originally deployed as a tool to enable it to better monitor its electric grid. The LUS business model is to stay out of the retail telecom service business, but to open the fiber network to any and all carriers, selling them access to the system on an as bandwidth is needed business. This model is

very similar to the carriers' carrier model used by long-haul network builders like Williams Companies, Enron, Level 3 Communications and others. It appears to be the first carriers' carrier model to be used in the metro loop business. The first legs of that system have now been connected and public buildings of Lafayette Consolidated Government are on the verge of transferring their services off of the public switched telephone network and onto the LUS system.

The goal of the carriers' carrier approach in Lafayette is to attract more telecom service providers into the market by lowering the cost of entering the market and to tie Lafayette into as many of the long haul fiber networks that run through and by the city as possible.

Once this system is fully operational, any carrier with a service agreement with one of the dozen or so long-haul fiber networks running through Lafayette can enter the market simply by buying bandwidth from LUS. This approach removes the need for service providers to build their own networks in Lafayette and thus focus their efforts and resources on bringing customers onto their system.

The LUS story is still in the very early stages of playing itself out, but it has already attracted the interest of the cities of Alexandria and Natchitoches, both of which – like Lafayette – own their own utility company. Both cities are now said to be taking a very hard look at building their own local fiber loops. It's too early to tell at this point whether these two cities will stick to the carriers' carrier model or whether they will dip into the retail service market.

The fundamental push for these municipalities to get into these areas of business has been the failure of private sector carriers and service providers to make infrastructure investments in their communities.

The Telecommunications Act of 1996 and the resulting explosion of electronic commerce, particularly business-to-business e-commerce, has transformed telecommunications infrastructure into essential economic infrastructure. Lafayette and Ville Platte have decided that access to this infrastructure is too important to the economic well-being of their cities for investment decisions regarding that infrastructure to be left solely in the hands of private sector companies.

State and local government have always had a hand in helping provide essential economic infrastructure as part of their stewardship of the community's economic prospects. They have — either together or separately — provided the funding for roads, bridges, drainage, educational facilities and other items that fall into the "Essential Economic Infrastructure" category. With telecommunications infrastructure now included in that category, local and state government leaders will be obligated to keep a close eye on telecom infrastructure buildout patterns in their jurisdiction to see if and how they might be required to influence those patterns.

In most cases, local and state governments are among the largest consumers of telecommunications and information technology services within their respective jurisdictions. Leveraging that key market position offers yet another way that government can affect the depth and width of the Digital Divide in ways outside the traditional roles of regulating providers or taxing their services. These new models are developing in Louisiana as well as some other states. The are many demonstrations of the various alternate paths being developed in communities like yours across the country. If your community has not been the beneficiary of investments in new telecom infrastructure, the good news is that there are plenty of examples of creative responses to this situation out there, if you're willing to look for them.

3) Human Capital

The third positive trend in Louisiana is the creation of a network of Cisco Systems networking academies by the Louisiana Community and Technical College System. This is a formidable response to the need to give people the skill set they need in order to find gainful employment in the digital economy.

In April of 2000, the LCTCS board approved the plan to start eight Cisco Academies on the campuses of its technical colleges. The first of those academies opened late last year on the Tech Area LCTCS campus in New Iberia. The remaining seven academies will all be active by the end of the spring semester. Once those academies are up and running, the high school level on ramps to this system will begin being deployed. Cisco's high school technology programs are general technology programs which seek to provide a sound grounding in computer and network technology and their operation. The LCTCS and the Board of Elementary and Secondary Education will cooperate to develop at least one high school level Cisco program in every public school district in the state.

This will provide a clear and direct response to a pressing need in the private and public sectors — a shortage of skilled technical workers. Without those skilled tech workers, the pace at which Louisiana businesses and government can move to capture the promise that Information Technology holds for them will be severely hampered. Speeding the transition of traditional business operations to Information Technology enhanced processes is a critical task to ensure the continued viability of those businesses. In an era defined by heightened competition, businesses not able to achieve the kinds of efficiencies captured by others in their field will not be in business for long. And you can't make the transition if you don't have the people with the skills to take you there.

Investing in human capital in the form of education and training in the use of the computers, networks and the Internet is the Siamese twin of the access issue that defines the Digital Divide. Access to the fastest networks in the world don't mean anything if a person, a company or a community don't know how to leverage that access into marketable products or services. Likewise, a pool of the world's most innovative computer programmers without access to computers or networks won't make any greater impression than an illiterate person with access to world class networks.

The Emerging Challenge:
Making Technology Part of Every Day Life for Every Delta Resident

It is in the area of investments in human capital where Louisiana and other states have the most ground to cover. While our state continues to make significant strides in infusing its institutions with technology, the Digital Divide will not be closed until our culture has been infused with technology. Technology that is restricted to institutions is still apart from the rest of our lives. When technology visionaries like Steve Jobs of Apple Computer and Bill Gates of Microsoft speak of what they call Digital Lifestyles, they mean lives where technology is routinely used to facilitate and enhance everyday activities. When access to technology is restricted to an hour or so a day at school, or limited to work hours only, that provides a newly refined measure of the extent of the Digital Divide.

As a result, it is becoming increasingly clear that current efforts to bridge the Digital Divide by focusing on ramping up the use of technology in our institutions is a necessary starting point, but it will not ultimately close that Divide. What is needed is a concerted effort to make technology an integral part of

the everyday lives of people living in the Delta.

The latest evidence indicates that the central fault line of the Digital Divide is economic resources — those who have the resources live on one side of that divide; those who don't, on the other. That could be construed as more bad news for the Delta, but I prefer to think of it as a marker pointing the way to how we can close that Divide.

What I think the marker says is that what is needed in the Delta are vehicles that can enable not only school children, but the families of school children to gain access to computers, networks and the Internet. That workers not only have access to technology on the job, but in the home as well.

The Economic Divide in the Delta cry out for a response to the Digital Divide that will move the front lines of the effort to bridge that Divide from the institution into the home.

Therefore, the challenge to the civic, financial and philanthropic leaders of the region is to work with educators and employers to develop a mechanism that will make computers and Internet access available to every family in the Delta.

State government leaders need to be challenged to work with bankers and organizations like the Enterprise Corporation of the Delta to link up with computer manufacturers, Internet service providers and nonprofit organizations to enable every student to own portable comuters that will enable them to connect to networks wirelessly in the classroom and over dial up modems or other means of access at home.

Companies operating in the Delta and their trade associations need to find a way to follow the model of Ford Motor Company and others who have developed means of leveraging their resources to enable their employees to purchase computers, peripherals and Internet access at reduced rates.

These challenges confront the Digital Divide at ground zero — at the individual, family and household level. This is where the last and most persistent elements of the Digital Divide exist and it is where our efforts thus far have not gone.

By bridging the divide at its core levels, we can begin closing the divide at other levels in our region and, with a little luck, begin to close the other Divides that separate us in the process.

That is the challenge before us. We have the resources; the real question is if we have the will. What will your response be?